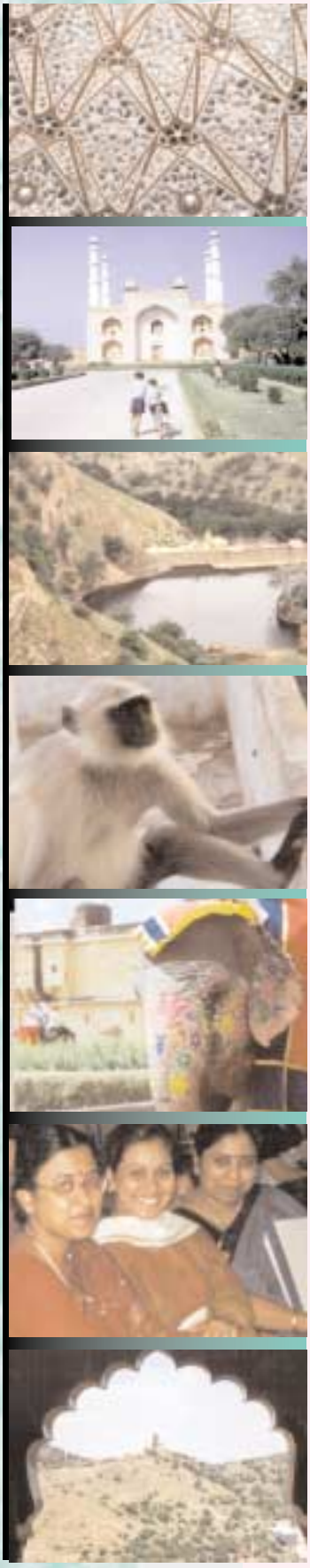
GreenCOM
Environmental Education & Communication Project

Research



Study of Indian Stakeholders on CO_2 Emissions Mitigation

Executive Summary

By Orlando Hernandez and Richard Breitenstein, GreenCOM
Based on Research by the
Business & Industrial Research Division of the
Indian Market Research Bureau, New Delhi

September 2000

GreenCOM
Communicating Climate Change in India

Study of Indian Stakeholders on CO_2 Emissions Mitigation

Executive Summary

Prepared for GreenCOM
By Rathina Kumar and Mohan Krishnan.
Business & Industrial Research Division of the
Indian Market Research Bureau, New Delhi

September 2000

GreenCOM
Environmental Education and Communication Project
U.S. Agency for International Development

Communicating Climate Change in India Project
Contract No. PCE-Q-00-93-00069-00, Task Order 807

This publication was prepared for USAID/India by the Environmental Education and Communication (GreenCOM) Project of USAID. The findings, conclusions, and recommendations expressed in this document do not necessarily reflect the official viewpoint of the U.S. Agency for International Development.

Prepared for GreenCOM
By Rathina Kumar and Mohan Krishnan.
Business & Industrial Research Division of the
Indian Market Research Bureau, New Delhi

For more information, contact:

GreenCOM
Academy for Educational Development
1825 Connecticut Avenue, NW
Washington, DC 20009 USA

Tel: (202) 884-8000
Fax: (202) 884-8997
E-mail: greencom@aed.org
Web site: www.usaid.gov/environment/greencom

GreenCOM publishes three series of reports designated in the diamond in the upper right cover.

- *Research* reports include assessments, formative research, focus group reports, summative research, and project evaluations.
- *Reports* are internal project reports including quarterly reports, final reports etc.
- *Products* describe discrete major events held such as press briefings or award schemes, or describe how published materials were used in a media campaign

Most GreenCOM reports are available on line at the web site above.

The Environmental Education and Communication (GreenCOM) Project is funded and managed by the Center for Environment in partnership with the Center for Human Capacity Development and the Office for Women in Development of the Bureau for Global Programs, Field Support, and Research of the United States Agency for International Development (USAID), and by the USAID Regional Bureaus and Missions at collaborating sites. Technical Services for the GreenCOM/Communicating Climate Change in India Project (Contract No. PCE-Q-00-93-00069-00) are provided by the Academy for Educational Development, and subcontractors including Chemonics International, Global Vision, North American Association for Environmental Education, Futures Group, PRC Environmental Management, Porter Novelli, and the World Resources Institute.

Executive Summary

GreenCOM is a worldwide USAID-funded environmental and communication program. A consortium implements GreenCOM. The main contractor is the Academy for Educational Development; an NGO based in Washington DC.

USAID/Delhi hired GreenCOM to assist in the implementation of two activities in support of the Climate Change Outreach and Awareness Program, a component of the Greenhouse Gas Pollution Prevention Project (GEP). These activities included the development of messages to be included in future educational materials for Indian stakeholders and the outreach to Indian journalists regarding green house gas mitigation strategies. In support of the development of educational materials, GreenCOM suggested the implementation of a study to understand the stakeholders' knowledge, attitudes and practices regarding energy efficiency (EE) and carbon emissions trading (CET). For the purpose of that research, stakeholders include energy-intensive industry, pertinent central government ministries and offices; environmental NGOs concerned with energy and world climate change issues, and journalists targeting the business community. This document summarizes the findings of that research.

The study focused on the knowledge, attitudes and practices about:

- Energy efficiency and green house gas emissions
- Carbon emissions trading
- Foreign investment.

In addition, it inquired about:

- Related topics on which stakeholders desired further information, and
- The preferred communication channels for obtaining it.

79 in-depth semi-structured interviews were held with representatives from the different stakeholder groups. The breakdown of study participants per stakeholder group is presented in Table 1. This table includes the number of interviews for which contacts were made and the number of interviews actually conducted.

This study focused on five energy intensive industrial sectors: sugar, cement, power, steel and aluminum. The selection of industrial firms within those sectors was based on three criteria: degree of energy efficiency determined by existing public information (high vs. low), type of ownership (private, public and cooperative), and geographic location. In the aluminum sector, however, all but one of the firms operating in India were included in the sample. In some specific cases, size and proximity to urban centers was also included in the criteria, particularly in the power sector. Study participants from the government sector included representatives from pertinent ministries and agencies identified by USAID. The selection of NGOs in the study was also intentional representing different known perspectives regarding carbon emissions trading. All major newspapers for the business community in Indian were also interviewed. Table 1 shows the breakdown of study participants by stakeholders.

Table 1 – Breakdown of Study Participants

	Contacted	Conducted
Industry		
Sugar	19	18
Cement	15	15
Power	14	12
Steel	6	6
Aluminum	4	4
Sub-Total	58	55
Government		

Ministry of the Environment	1	1
Power	1	1
Industry	1	1
Steel	1	1
Coal	1	1
External Affairs	1	1
National Productivity Council	1	1
Central Pollution Board	1	1
Energy Management Center	1	1
Planning Commission	1	1
Indian Renewable Energy Development Authority	1	1
Ministry of Non Conventional Energy		
Sub-Total	1	-
	12	11
State Government		
AP State Pollution Control Board	1	1
Maharashtra Pollution Control Board	1	1
Orissa Pollution Control Board	1	1
AP Power Generation Corporation	1	1
Maharashtra Energy Development Agency	1	1
Orissa – Department of Energy	1	-
Sub – Total	6	5
NGOs		
Centre for Science & Environment	1	1
Development Alternatives	1	1
Tata Energy Research Institute	1	1
Indira Gandhi Development Institute	1	1
Sankat Morchan Foundation	1	-
Indian Environmental Society	1	-
Sub-Total	6	4
Journalists		
Business Standards	1	1
Financial Express	1	1
India Today	1	1
The Hindu	1	1
Newsbreak	1	-
International Journal of Sustainable Development	1	-
Business India	1	-
Sub Total	7	4

Private Sector

Regarding industry, the data permit to draw the following major conclusions.
55% of the visited industries were classified as highly efficient, 15% as moderately efficient, 20% as inefficient, and for 9% no information was available to classify them.
There was evidence of some level of commitment to energy efficiency as one of the study participants is already discussing carbon emissions trading with a Japanese counterpart. Furthermore, in the aluminum sector, study participants reported the existence of environmental resource conservation committees, which address energy efficiency measures, the use of rewards for energy efficiency ideas that are submitted by staff and/or the existence of self-imposed energy audits, which are practiced periodically. There is one company in the aluminum sector that has an awareness program to educate energy users and operators about the right operational methods and the correct operational parameters. Reflecting on the general approach to energy efficiency, one of the study participants from the cement sector indicated that in the firm he represented “energy efficiency is a continuous process”, arguing that in that sector energy represents up to 40% of the production cost.

There is also evidence that there is concern for environmental issues in general, even though this may be the exception rather than the rule. But in one company in the aluminum sector, has an electronic journal on environmental management called Enviro-Mail.

Self-reported primary motivations for adopting energy efficiency measures among the highly and moderately efficient firms include: 1) reduction of operating costs, 2) increasing competitiveness, 3) increasing revenue, and 4) improving the company's image which would potentially lead to increased market share. Secondary motivations include interest in reducing: 1) CO_2 emissions, 2) pollution in general. Barriers for adopting energy efficiency measures among the inefficient firms include: 1) lack of funds, 2) no access to (appropriate) technology, 3) poor quality of raw materials making the investment unjustifiable, and 4) fear of privatization (in the case of one firm in the steel sector).

As far as knowledge gaps to be filled and existing misconceptions to be corrected, the findings show that in some sectors such as the sugar and cement sectors, the connection between energy efficiency, C02 mitigation and global warming is not always easily made, and in some more limited instances it is not made at all. Some of the study participants in these two sectors also argued that car pollution is more important industrial pollution when it comes to environmental pollution in general and carbon pollution in particular. Other study participants from the sugar and cement sectors also argued that any debate on green house emissions mitigation should be concerned with how CO_2 mitigation goals will affect industry and not how industry affects $C0_2$ mitigation. Study participants from the industry in general asked what CO_2 mitigation goals has India set for itself, and how will industry be required to meet those objectives. Among some firms, the possibility of carbon emissions trading is unknown. Equally, in some cases, plant managers believe that planting of trees around their plants is enough of a measure to mitigate CO_2 emissions.

Among the more efficient firms, however, carbon emissions trading is for the most part feared for it may imply additional regulations and consequently the demand to adopt further energy efficiency measures. The question that arises, then, is whether or not sufficient energy efficiency measures have been already adopted, and where would firms obtain funding to make those additional investments.

Topics of interest for future dissemination efforts include:

- details on climate change policy in India,
- technologies for CO_2 mitigation and relative merit vis-à-vis current options,
- cost and economies of these proposed technologies,
- funding options and mechanisms for arranging these funds,
- guidelines for carbon trading mechanisms,
- explanation about procedures to be adopted for the establishment of baseline for determining mitigation efforts and trading,
- institutions involved in monitoring and certifying CO_2 emissions mitigation, and long term implications of implementing carbon emissions reduction trading mechanisms.

Financial information to be disseminated in future EE&C interventions need to be addressed to top management and technical information needs to be addressed to Chief Engineers and/or Heads of Technical Departments.

Credible sources of information are industrial associations such as the Confederation of Indian Industries and the Federation of Indian Chambers of Commerce.

Preferred media include mainly print (newsletters, booklets or books). Firms are also interested in training workshops for the staff provided that they are held in proximity to plant locations. Study participants from the industrial sector have also suggested that the information needs to flow through different mechanisms, for different levels in order to be mutually reinforcing.

Government

Results pertaining to government indicate that three out of ten study participants from the government are more favor overall CET. The rest, eight out of eleven, expressed reservations or were openly skeptical about it. The skepticism is more apparent concerning the implementation of a CET program that about its general objectives.

Supporters indicated that CET would have three major advantages for India:
- Increased industrial efficiency
- Permit transfer of technology, and
- Permit a cleaner environment for all.

Study participants from the government expressing reservations or skepticism indicated that:
- The Indian Government has yet to publicly announce its position on CET; particularly via the Ministry of the Environment and Forests.
- Reduction of CO_2 emissions and climate change do not constitute at this point a priority for India;
- India is not a major CO_2 world-wide polluter;
- Developed nations bear more responsibility to the problem and they need to reduce CO2 emissions in their countries as well;
- The efficacy of proposed CO_2 mitigation programs needs to be tested;
- Success of pilot programs needs to be known before accepting CET at face value.

Preferred channels of communication to convey information on CET are:
- Written information disseminated through government and NGO literature;
- Electronic media; and
- Seminars targeting both government and industry with experts from a CET managing body permitting interaction and dialogue.

Content of interest would include details on how CET would operate:
- who sets baseline,
- how it is done,
- who monitors projects,
- who certifies projects,
- how is credit monetized.

NGOs and Media

In general, the level of skepticism and at times opposition to CET is apparent among the NGO community and journalists participating in the study.

Although NGOs expressed that CET will increase foreign investment in big projects, they also believe that:
- Developed nations should address the reduction of CO_2 emissions without having to recur mainly/entirely to credits via CET obtained from developing nations;
- The ratification of the Kyoto Protocol by the US Senate is still pending and may not happen any time soon or it may not happen at all;
- CO_2 mitigation goals should be set on a per capita basis;
- Projects developed independently of Kyoto will not get credit under that program;
- There is no CET structure in place yet;
- Who is going to be in charge and decide about how to establish baselines, a monitoring system and certification of CO_2 mitigation;
- CET may end up being too expensive for industries in general.

NG0s expressed a preference for CET information to be conveyed to them through training programs, workshops and seminars targeting industries, government officials and the NGO community.

Journalists expressing neutrality on the CET issue suggested that CET will allow for financial assistance from the North to the South and help increase the productivity of Indian industry. The concerns expressed by the opponents are similar to those expressed by NGOs included in this study. Additional concerns include: an interest in developing nations retaining for themselves part of the CO_2 mitigation credit and the fear that to protect themselves developed nations would either provide obsolete technology or limited capital access to developing nations.

Journalists also expressed interests in being invited to participate in fora that bring together all the different stakeholders considered in this study. They express an equal interest in seminars and debriefings for the press.

Potential Messages Emanating from Research Findings

Industry

Potential messages for less efficient firms may include the following:

- You can SAVE MONEY (reduce operating costs) by being more energy efficient.
- You can consequently increase profits and competitiveness.
- There are highly energy efficient firms in India. Examples from all sectors.
- India must take control of its regional climate regardless of developed nations perceptions, intentions and actions.

Potential messages for energy efficient firms may include the following:

- Besides saving money by being energy efficient, you can MAKE MONEY by selling carbon emissions reduction credits. This is the frosting on the cake.
- Case Study: One Indian firm is already involved in negotiating CET with Japanese counterpart.
- Examples of CET benefits in other countries.
- Ways to prepare for CET and be ready when it the ball gets rolling: monitor and establish your baseline now, etc.
- Carbon emissions trading is coming: Here is HOW to do it.
- International buyers provide both funds and technology.
- Boost to industrial sectors via CET will make India more competitive in world market.
- EE firms are environmentally friendly and this improves their public image.
- Technology and capital infusion via CET will help Indian economy providing capital and jobs to mitigate social and environmental concerns.

Potential clarification messages for all firms, particularly in the cement and sugar sectors, could include the following.

- CO_2 is one of the Green House Gases that contributes to global warming.
- Since low-grade coal, which is a big CO_2emitter, is used in India for power, EE firms can do a lot to reduce the emissions of CO_2.
- Reducing CO_2 emissions slows global warming.
- India has signed the Climate Change Convention calling for efforts to slow Green House Gas Emissions.
- India's current energy efficiency goals and standards are . . .
- Regardless of the international agreement made by governments on the Kyoto Protocol, there will probably be some form of carbon emissions trading.

Government

Possible messages targeting the government sector include the following.

- India must take control of its regional climate regardless of developed nations' perceptions, intentions and actions.

- Help shape CET policy. Express your perspective on CET to the Ministry of the Environment now.
- CET programs will enhance India's image in environmental concerns in South East Asia.
- Boost to industrial sectors via CET will make India more competitive in the world market.
- CET will bring funds and technology to help mitigate social and environmental concerns in India.

CO_2 emissions mitigation will help reduce global climate problems such as melting of glaciers in Himalayas and flooding in countries like Bangladesh.

Communicating Climate Change in India
Contract No. PCE-Q-00-93-00069-00
Task Order 807

GreenCOM
Environmental Education and Communication Project

USAID

AED
Academy for Educational Development